

Growing WILD

Winter 2000

Utah's Project WILD Newsletter



Utah's Musky Mammals: the Mustelidae and the Mephitidae

The mustelids, animals that belong to the family Mustelidae, form a wide ranging and very diverse group of mammals. They are native to all continents except Antarctica and Australia, and form the largest family of carnivores. The Mustelidae family includes weasels, ermine, ferrets, polecats, mink, otters, badgers, wolverine, and until recently, skunks, which now, based on DNA studies, are considered to be a completely separate family, the Mephitidae.

Mustelids exhibit a good deal of variability in size and habits. *Mustela*, the largest genus within the Mustelidae includes the true weasels, the smallest carnivores; the ermine (or stoat as it's called in Europe) and the least weasel which are among the few mammals that turn white in winter; the slightly larger mink that are good swimmers; and the still larger polecats and ferrets which are fond of open country and most often inhabit grasslands.

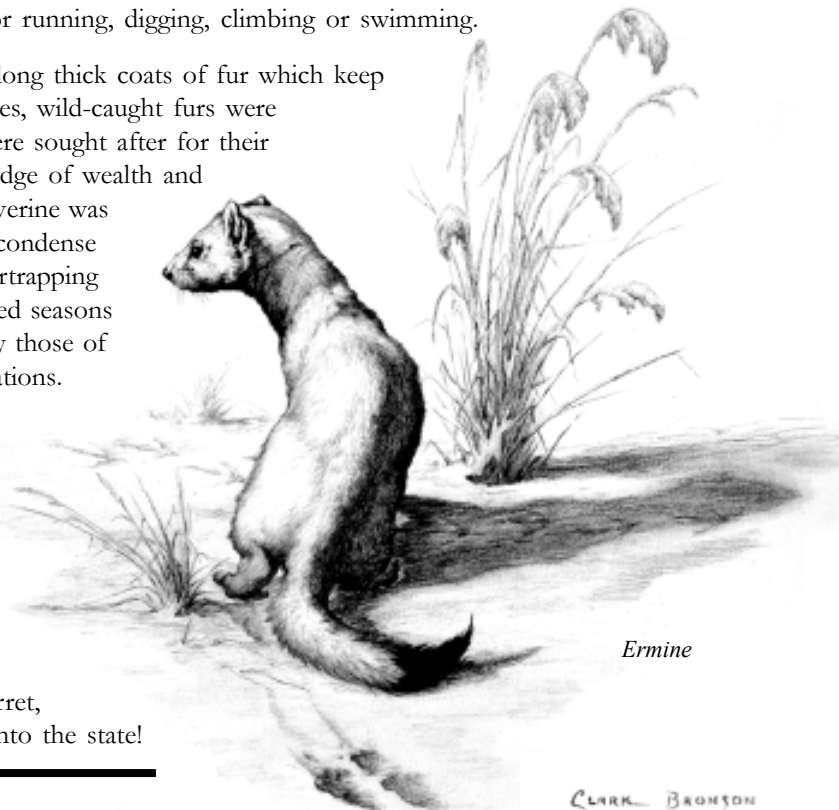
Another genus, *Martes*, includes the tree climbers -- martens, sables and the fisher. Otters, the "water weasels" represent the aquatic mustelids. Badgers and the wolverine make up the largest and stockiest of the terrestrial mustelids. And several others, an extremely long and slender mustelid known as the African striped weasel and the South American forest-dwelling mustelids known as grison and tayra (a type of marten), are the mustelids many of us have probably never heard of before!

Despite their incredible diversity, all mustelids and skunks have well-developed scent glands which produce a thick, oily, yellowish foul smelling fluid called musk. As is most notably demonstrated by skunks, musk is used as a potent weapon to ward off enemies. It is also used to mark territories. In marking a territory, musk is secreted along with droppings which are deposited in specific locations that signal ownership of the area.

In general, mustelids and skunks display a basic, short-legged and elongated body design that in conjunction with strong, sharp teeth typical of carnivores, allows them to be quick, agile and extremely effective and efficient predators. Most use scent to track their prey, although their sense of hearing is also well developed. In addition, most have well developed, but short non-retractable claws and powerful limbs adapted for running, digging, climbing or swimming.

Many mustelids have been prized throughout history for their long thick coats of fur which keep them warm and dry in the winter. In the 18th and 19th centuries, wild-caught furs were important to the economy of northern lands. Mustelid furs were sought after for their beauty and practical value. Furs of Russian sable became a badge of wealth and rank; mink was, and still is for some, a synonym for luxury; wolverine was desired as a trimming for parka hoods because frost would not condense on it; and ermine was traditionally worn by British justices. Overtrapping driven by an insatiable market eventually led to carefully regulated seasons and quotas for the trapping of furbearers. Many furs, especially those of mink, are now also almost entirely derived from farming operations.

Overall, the news about Utah's musky mammals is good. The wildlands of our state provide habitat for quite an array of species: two types of skunk, the badger, two weasels, the marten, mink and the river otter. Populations of most, but not all of these species are faring within reason. A few recent sightings of the never abundant wolverine, a Threatened species in Utah, have been documented within several mountainous regions of the state. And recently, the federally Endangered black-footed ferret, the rarest mammal in North America, was reintroduced back into the state!



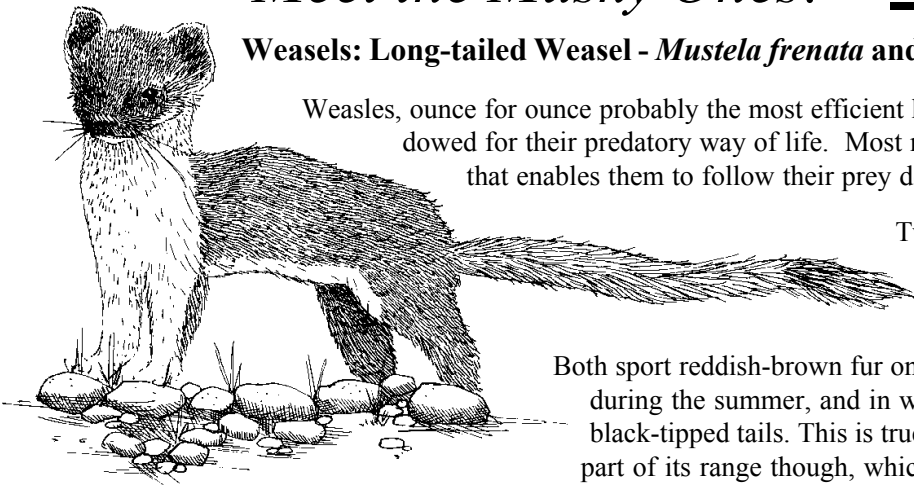
Ermine

CLARK BRONSON

Read on to learn more about Utah's Musky Mammals!

Meet the Musky Ones!

Weasels: Long-tailed Weasel - *Mustela frenata* and Ermine - *Mustela erminea*



Weasels, ounce for ounce probably the most efficient killers of all carnivores, are wonderfully endowed for their predatory way of life. Most notable about weasels is their long slender body that enables them to follow their prey deep into the remotest depths of their retreats.

Two different species of weasels make their home in Utah: the long-tailed weasel and the ermine, previously called the short-tailed weasel. Both species are similar in appearance and habits.

Both sport reddish-brown fur on their backs and lighter fur on their bellies during the summer, and in winter, both turn snowy white, except for their black-tipped tails. This is true for the long-tailed weasel, only in the northern part of its range though, which extends from Canada to Peru.

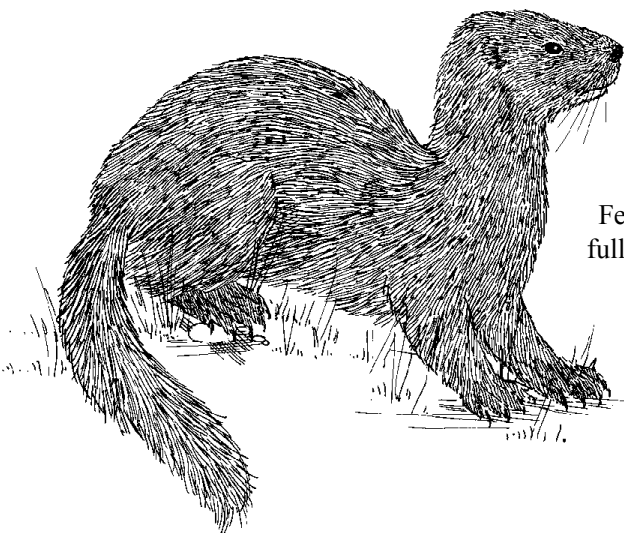
Size is the main difference one can use to distinguish between the two species, although a pronounced sexual dimorphism within each species, where males are about one-third longer and about twice as heavy as the females, adds some confusion. The long-tailed weasel is the largest, measuring 11 to 22 inches long excluding the tail and weighing 7 to 12 ounces. The ermine in contrast, is about 7 to 13 inches long minus the tail and weighs 2 to 7 ounces. Another feature used to tell the two species apart is the length of the tail in proportion to the body. Long-tailed weasels, as implied by their name, have long tails that measure nearly half the length of their bodies. The tails of ermines are about a third the length of their bodies.

Weasels inhabit a wide variety of habitats such as brushy areas, forest edges, alpine meadows, marshes and riparian zones. Here they hunt continuously for small mammals such as mice, voles, pocket gophers, squirrels and even rabbits that significantly outweigh them. They are feisty, voracious predators eating as much as one-third of their body weight every day. Their long, thin bodies expose more surface area to the elements causing them to lose heat faster and so they must eat often to keep warm.

Darting in and out of rodent burrows, checking crevices in rock piles and searching through the brush, weasels find their prey mainly by scent, although they use keen eyesight and hearing as well. Once prey is found, the weasel pounces upon it, wraps its slender body tightly around it, and skillfully delivers a sharp bite to the back of the neck for a quick dispatch. The instinct of weasels to kill more prey than they can sometimes eat has garnered them a nasty reputation. The name weasel is from an Anglo-Saxon word, *wsule*, meaning "savage and bloodthirsty." Their surplus kill is usually cached for later, and their drive to kill is merely an adaptive strategy that helps insure survival when prey becomes scarce.

Mink - *Mustela vison*

Say the word "mink" and the first thing many people think of is a luxurious fur coat. Shortly before the Civil War, mink were the first American furbearers to be raised in captivity for commercial production of their fur. Mink though are more than just a pretty coat.



Mink are medium-sized semi-aquatic members of the weasel family.

Their glossy, lustrous fur is a uniform deep chestnut to dark chocolate brown color, set off by a white patch or two on the chin, throat or chest. Minks have a long, sleek body, short sturdy legs and a moderately bushy tail about one-half as long as their body. They grow to about two feet in length and weigh up to three and one-half pounds.

Females are about 10 to 20 percent smaller than the males. Their feet are fully furred except for the pads of their partially webbed toes and soles.

Mink are a widely distributed species ranging throughout North America except in the arid regions of the southwest. In Utah they inhabit mountainous regions and they make their homes along streams, lakes, rivers and marshy areas.

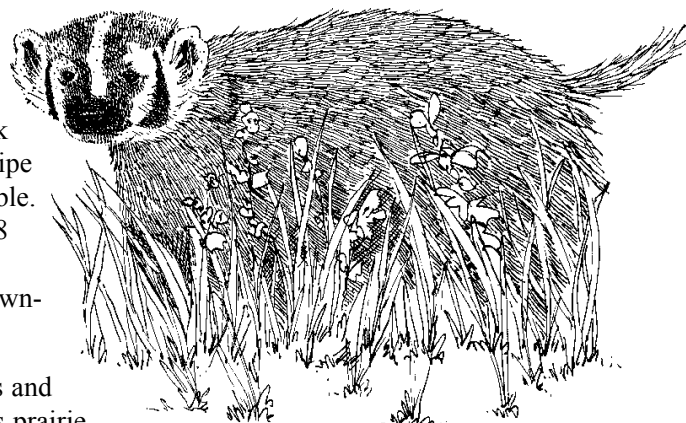
The diet of minks is extremely varied. On land they eat mice, voles, rabbits, moles, bats, songbirds, waterfowl, poultry, lizards and earthworms. In water they catch all kinds of fish, frogs, turtles, snakes, crayfish and muskrats. They den in a variety of places as well such as under logs, in abandoned beaver lodges, in tree cavities and often in muskrat dens which may have become vacant because the tenants were eaten by the new occupants!

During the breeding season male minks roam widely in search of females. They bound along in a comical lope reminiscent of an inchworm. To attract a mate, they scent mark their path with an especially foul-smelling secretion even more obnoxious than that of a skunk. The act of mating is a relatively aggressive event in minks. Females struggle fiercely but are overcome by the larger, stronger males. The intensity of mating functions to stimulate ovulation. After mating though, the females often bear scars from the teeth and claws of the males.

Mink are very secretive and active only at night, making the chance of seeing one quite rare. Scanning the mud or snow along the edge of a stream or pond though may reward you with their small, five-toed tracks, similar to those of a cat, but with indentations from their claws.

Badger - *Taxidea taxus*

The badger gets its name from its characteristic white and black markings or “badges” that distinguish its face. A long white stripe running up the center of its upturned snout is especially noticeable. Badgers are stout, flat-bodied mustelids. They average about 28 inches in length and weigh between 12 and 24 pounds. Their shaggy long coat of fur varies from grizzled silvery-gray to brownish in color and its legs are black.



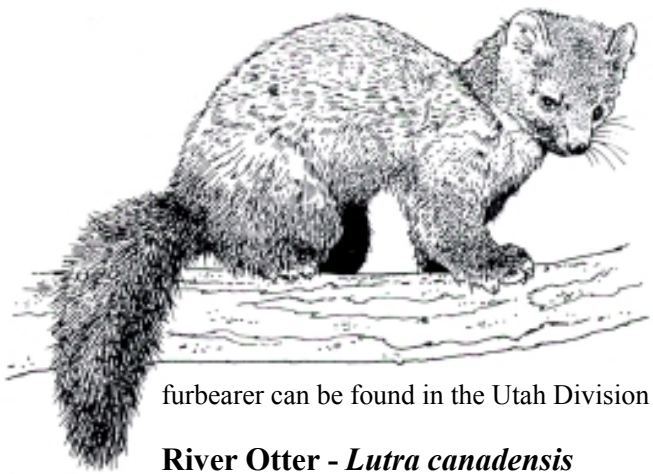
Badgers are residents of arid grasslands, semi-desert shrublands and open sagebrush country where ground-dwelling rodents such as prairie dogs, ground squirrels, wood rats, pocket gophers, kangaroo rats, and mice are plentiful fare. They range from the northern Midwest across nearly all of the west from southern Canada south to central Mexico.

Characterized as a four-legged backhoe, the badger is most noted for its incredible digging ability. Equipped with powerful short forelegs, thick wrists and huge, two-inch long, curved claws on its front feet and shovel like ones on the back, digging is how a badger makes its living. Using a keen sense of smell, the squat, broad-bodied badger waddles about at night in search of small mammal burrows to excavate. A trail of hole after hole, each with mounds of fresh dirt, is evidence of a marauding badger's hunting escapade the night before.

Badgers dig not only to capture their prey, but to also rest, nest and keep danger away. Throwing up geysers of earth in its wake, a badger can vanish into the ground within seconds, leaving only a patch of fresh soil to mark the spot. Few predators though ever attempt to take on badgers which are notorious for their ferocity. When cornered they fight fiercely, charging, growling and snarling. Because of this, people once trapped them to pit against dogs for amusement. From this cruel sport came our usage of the word “badger” in reference to harassment and torture.

Adult badgers are usually solitary except during the mating season in early autumn. After mating, the embryo does not immediately implant in the uterine wall of the female, but remains suspended in the womb for a period of time. This unique reproductive process, called delayed implantation, is found in most members of the mustelid family. It is an adaptation that allows mating to occur and young to be born at ideal times even though the intervening time is longer than the gestation period. In spring, implantation occurs and development of the young proceeds. To bear her young, the female settles into a burrow about two to six feet deep at the end or a tunnel up to 30 feet long. Two to five young are born, lightly furred and blind. They are protected from the chill of the earth by a nest of dry grasses. At four weeks of age their eyes open and weaning occurs near eight weeks, when they are about half grown. The young stay with their mother until late fall when the family scatters.

The thick fur of badgers was often used as a trim on many Native American garments and was desired for use on collars, cuffs and rims of hoods. Its stiff hairs also once made up the bristles of high quality shaving brushes. Today, the badger's chief economical value lies in its helping to keep down excessive populations of rodents. Ecologically, abandoned badger dens provide shelter for a wide variety of other wildlife species.



Pine Martin - *Martes americana*

The pine martin is “Public Enemy No.1” to a red squirrel, its favorite prey. Pine martins are excellent tree climbers and reside exclusively in mature, high-elevation coniferous forests. Loss of habitat from logging, fire and other human disturbances has pushed this beautiful wilderness species into decline. More information about this elusive furbearer can be found in the Utah Division of Wildlife Resources’ Wildlife Notebook Series No. 4:

River Otter - *Lutra canadensis*

Otters, the most aquatic of all mustelids are uniquely adapted for their watery existence. Webbed toes, dense insulating fur, a streamlined body and large lungs that enable them to dive for extended periods make them adept at foraging for the fish, frogs, crayfish and other aquatic critters they eat. Learn more about this rare species in the Utah Division of Wildlife Resources’ Wildlife Notebook Series No. 2

Wolverine - *Gulo gulo*

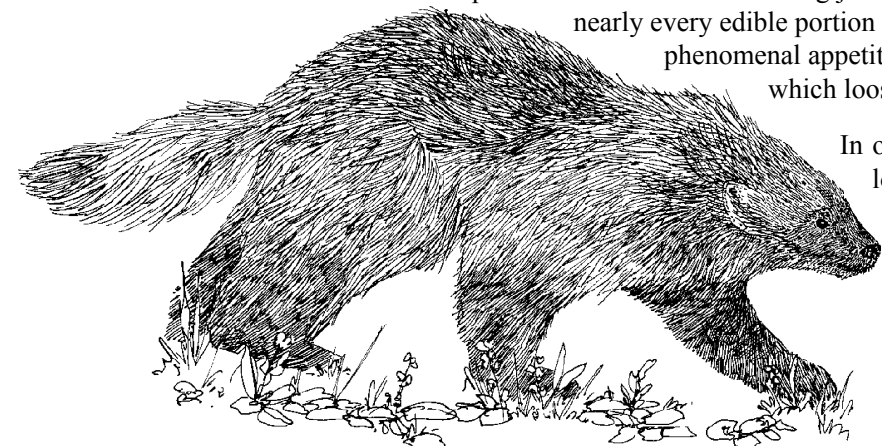
Fabled “devil beast” of the north, the wolverine has a reputation larger than life. From its remote wilderness haunts have come legendary tales of a savage creature able to pull down moose and caribou many times its size, drive grizzly bears and mountain lions from their kills, destroy human habitations to feast on caches of food and raid traplines without itself being caught. Scientific research has taken some of the glamour from these stories, but basically they’re true.

The wolverine is renowned for its ferocity, cunning and endurance. The largest member of the mustelids, it is a low, squatly-built, heavy-bodied and strong-legged animal measuring about 31 to 44 inches in length and weighing 20 to 35 pounds. Its high-arching back is covered with long shaggy fur that is dark brown to almost black in color, offset with a broad yellowish-white stripe that runs down each side of its body from the shoulders to the top of its bushy tail. Grizzled-gray patches above its eyes highlight its dark muzzle and short ears.

The wolverine is a creature of the far northern coniferous forests and barren arctic tundra. It is circumpolar in distribution. In North America, it originally ranged in remote wilderness areas throughout Alaska and Canada, across the northern tier of the United States and south into the mountainous regions of the Intermountain West. Westward expansion by settlers across North America resulted in conflicts with wolverines which, like many other predators, quickly became branded as outlaws. The last reliable sightings of wolverines east of the Mississippi River are more than one hundred years old. In the mountainous west where wolverines have held out longer, they have been forced back into the wildest and most inaccessible areas. In Utah, the last sightings of this elusive and secretive animal, until recently, were in the 1920s near the town of Brighton. Three reliable sightings in the early 1990s suggest that the species is still present in parts of the Wasatch and Uinta mountains and the mountains of the central part of the state in Sanpete County.

Wolverines are tireless wanderers covering as much as 40 miles over vast expanses of wilderness in one night in search of prey. They hunt for medium-sized animals such as beavers, porcupines and ground squirrels, but don’t hesitate to attack much larger prey such as deer or elk, especially if sick, weak or trapped in deep snow. They are also the ultimate scavengers, dining readily on carrion and employing their vicious and fearless nature to drive larger predators off their kills. Strong jaws and bone crushing teeth allow them to devour nearly every edible portion of their kill. Known to gorge themselves, it is their phenomenal appetite that inspired their scientific name, *Gulo gulo*, which loosely translates into “gluttonous glutton.”

In other states, it has been shown that roads, such as logging roads, pose a serious threat to wolverines, an indication that preserving large intact tracts of true wilderness will be essential for sustaining Utah’s rare and wonderful wolverines.



Skunks: Striped Skunk - *Mephitis mephitis* and Western Spotted Skunk - *Spilogale gracilis*

Say skunk, and the response you usually get is, “P-e-e-y-u-u!” The pungent musky smell of a skunk is one of the most notorious and unmistakable scents of the natural world. Wafting on a nighttime breeze, it can be smelled up to a half a mile away. Classified in the past as mustelids, skunks have now been placed in a separate family of their own called Mephitidae. This Latin family name, which loosely translates into “bad odor,” obviously applies well.

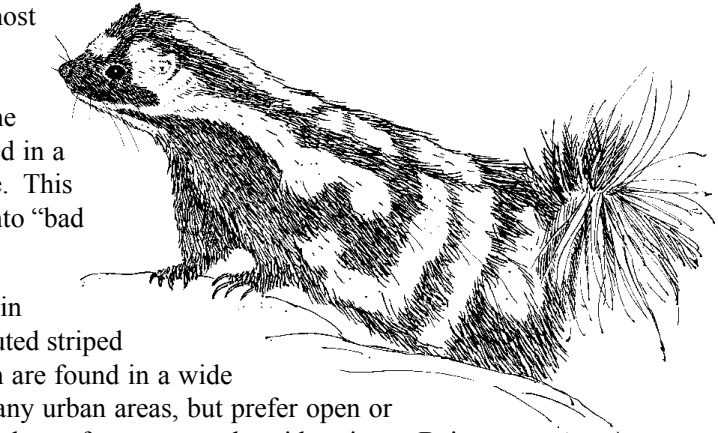
Two unique species of skunk can be found in Utah: the more common and widely distributed striped skunk and the western spotted skunk. Both are found in a wide variety of habitats. They are common in many urban areas, but prefer open or forest edge areas, often near water, and are absent from extremely arid regions. Being omnivores, they eat a diversity of things including insects such as grasshoppers, beetles and moth larvae, small rodents such as mice and shrews, occasionally eggs of birds and seasonally available fruits.

Although more often smelled than seen, almost everyone is familiar with the coloration of the striped skunk. Its deep glossy black fur is contrasted by two broad white stripes that run from the crown of its small head along the sides of its body to the base of its tail. A thin white stripe also runs down the middle of its forehead, and its bushy tail is accented with variable amounts of white. The larger of the two species, the striped skunk is described to be about the size of a big housecat -- about 20 to 32 inches long, less the tail which measures 7 to 16 inches and weighing between 6 and 14 pounds. The much more secretive spotted skunk, or “civit cat” is about half the size of its larger cousin, measuring about 20 inches and weighing about two pounds. Its coat is a collage of white spots and broken white stripes on a background of silky black fur. Spotted skunks are noted for being excellent tree climbers.

Skunks are most famous for their unique mode of biological warfare -- their ability to spray or squirt their musk to defend themselves. The musk of skunks is a highly volatile golden yellow and slightly phosphorescent oily liquid that contains an extremely irritating sulphide-alcohol compound known as mercaptan. Skunk oil, as anyone who has been sprayed knows, is especially enduring. Because of this clinging property, it was once commonly used as a base for fine perfumes.

Like other musk-carrying mammals, skunks store their musk in two pouches at the base of their tail. In skunks though, the openings of their pouches are shaped like the nozzle of a hose. By tightening strong muscles around the pouches, skunks can forcibly eject their musk. The nozzles can be controlled to vary the distance of spray to aim at targets near or far with amazing accuracy. The musk can be discharged in a fine mist or a jet-like stream, reaching up to 15 feet away. Musk is a potent and stinging eye irritant that can cause temporary blindness. And skunks, it seems, innately aim for the eyes of their victim.

Spraying is the ultimate response to danger and skunks give plenty of fair warning before shooting their musk. First, with stiffened front legs, they alternately pat the ground and shuffle in a little dance. Sometimes they softly snarl or click their teeth too. Next they raise their bushy plume-like tail. And then, when it’s already too late, they swing their hind end around in the form of a “U” to take aim. Spotted skunks raise themselves up in an artful, arched-back handstand to do the same. If you unfortunately witness this yourself it’s probably time to get out the tomato juice or vinegar, or better yet, head to the Division of Wildlife Resources for some neutroleum alpha solution, the best remedy currently known.



Objective: Students will learn more about the various musky mammals in Utah and develop a variety of skills in music, creative writing, language arts and science.

Method: Students create and share new musky mammal lyrics to a popular nursery rhyme tune.

Background: See this issue of *Growing WILD and Nature's Call* for background information on the various species of musky mammals in Utah.

Materials: Writing materials and paper; Music to the popular nursery rhyme "Pop! Goes the Weasel." (Words to this nursery rhyme which is thought to be French in origin, are published in various children's songbooks. Some include all the verses, some just part, and some give limited information about the background of the rhyme.); Sample verses about Utah's musky mammals provided below.

Procedure:

- Review the upbeat tune of the nursery rhyme "Pop! Goes the Weasel."
- Discuss the words of the nursery rhyme and sing the song as a group.
- Address whether or not the words to the nursery rhyme actually help them learn anything about weasels. Does it remind them of energetic weasels perhaps though?
- Review some of the characteristics of Utah's musky mammals with the class.
- Now, using the same tune, have the students write their own new lyrics about some of the different musky mammals. Tell them that their words should teach others something about their specific musky mammal.
- Have students share their new lyrics with the class. Discuss what each new verse teaches others about the animal.
- Print all the new verses on a single sheet of paper. Make copies available for everyone and hold a group sing-a-long.

Sample Verses:

*Digging and digging throughout the night,
the badger looks for rodents.
It has sharp claws and powerful legs.
Growl! says the badger.*

*The prairie dogs are nearly gone.
Along with all the prairie.
Will ferrets see another dawn?
Help! says the ferret.*

Badger



CLARK BRONSON

Related Project WILD Activities:

Power of a Song; Animal Poetry

Activity Adapted From: The Black-footed Ferret: Understanding an Endangered Species - Activity Guide for Teachers. Created by Badlands National Park. Available from Project WILD.

Resources

You “Otter” Call for These!!

Project WILD (801) 538-4719

Musky Mammal Resources:

The Black-footed Ferret: An Endangered Species Comes Home - Stunning new, full-color poster created by Project WILD to commemorate the reintroduction of the endangered black-footed ferret into Utah.

The Black-footed Ferret: Understanding an Endangered Species - Excellent activity guide for educators featuring not only ferrets, but mustelids in general. Produced by Badlands National Park.

Black-footed Ferret Reintroduction Resource Materials - Additional black-footed ferret educational materials: a full-color information booklet produced by the Arizona Game and Fish Department, a colorful and informative bookmark and an excellent article from the Utah Division of Wildlife Resources' *Wildlife Review* magazine.

Wildlife Notebook Series: The Black-footed Ferret, the Marten and the River Otter - Three 4-page fact sheets in the Utah Division of Wildlife Resources' Wildlife Notebook Series.

North American River Otter Education Packet - Wonderful educator's activity guide featuring the River Otter. Features a number of Project WILD activity adaptations. Produced by the Indiana Department of Natural Resources Division of Fish and Wildlife.

The River Otter - Full-sized Discover Utah Wildlife poster depicting the fascinating river otter.

Utah Marten - A little bit of Utah history is featured in this 11x17 inch black and white reprint poster first featured in a 1962 issue of the *Utah Fish and Game* magazine.

Skunks and their Relatives - Fun-filled “Zoobook” issue featuring the musky mammals. Cost is \$2 (paid to UDWR).

Musky Mammal Folklore - Selected pages, specific to the musky mammals, taken from the interesting book, “Wildlife Folklore” by Laura C. Martin.

New For Check-out:

Black-footed Ferret Reintroduction Educational Materials Kit - See pages 8-9 of this issue.

Yellowstone Otters - Beautiful video with excellent photography from the “Nature” Series. 55 min.

Canyonlands: America's Wild West - Exceptional video highlighting this intriguing region of Utah and its native wildlife. 55 min.

River Otter

Other Free Resources:

Federal Junior Duck Stamp Conservation Design Program Curriculum Guide - Excellent, comprehensive educator's activity guide to supplement the Federal Junior Duck Stamp Art Competition.

Goblin Valley State Park - Exquisite poster of this Utah State Park's unique landscape.

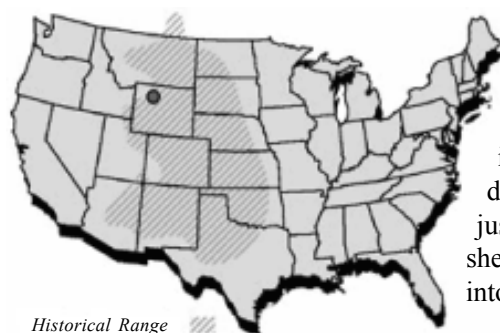


Endangered Species Profile

The Black-footed Ferret An Endangered Species Comes Home!

Fantastic, Far-Reaching News: The black-footed ferret, once thought to be extinct has come home to Utah! On October 21, 1999, Utah made national headlines as we welcomed the black-footed ferret back to the northeastern part of the state. On that festive day, twenty-six ferrets were released into Coyote Basin near Vernal, a site chose for its remote prairie dog-rich habitat. Additional releases followed in October and November, bringing the total number of ferrets released to 70. So far, so good! The ferrets are doing well in their new surroundings. With plenty of thanks to the sponsoring agencies, the Bureau of Land Management, the Utah Division of Wildlife Resources, the Colorado Division of Wildlife, and the US Fish and Wildlife Service, the reintroduction plan has been a success. The black-footed ferret, one of the rarest mammals in North America is making a comeback.

Featuring the Black-footed Ferret (BFF): Worldwide, there are only three existing species of ferrets. North America has known only one, the black-footed ferret, *Mustela nigripes*. Scientists say ferrets evolved from a European weasel-like ancestor several million years ago. As ferret populations grew and dispersed geographically over time, two main species, the European and the Siberian, became recognized. It appears the North American species came into being just over half a million years ago, after Siberian ferrets migrated over the bearing land mass which connected the two continents.



Historical Range
Last Known Range

The North American black-footed ferret eventually settled into the heart of the continent, inhabiting a vast expanse of grasslands and short grass prairie. They ranged throughout two provinces in southern Canada, twelve states of the great plains and southwest regions of the United States and possibly down into parts of northern Mexico. More simply stated, where there were prairie dogs, there were black-footed ferrets. The BFF found prairie dog habitat to be just right. The food source was plentiful, and prairie dog dens served as great shelters. Over time, the BFF perfected the art of prairie dog predation, developing into one of North America's most highly specialized predators.

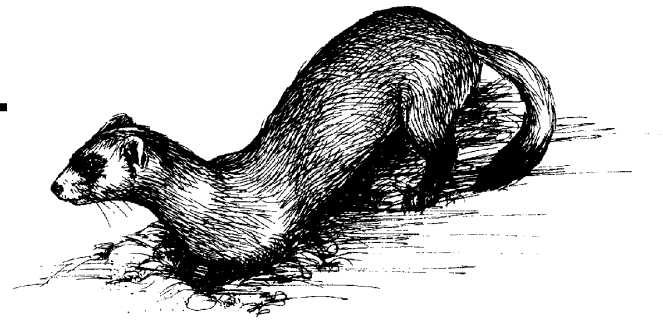
The black-footed ferret is a sleek-bodied, long-tailed mustelid. An adult measures around twenty inches in length, and an additional four to five inches accounts for its tail.

The BFF is surprisingly light, weighing a mere one to two and a half pounds. Its coloring is buff or yellowish, with a brownish wash down the back. While its face is mostly whitish, the BFF has a unique chocolate or black coloring around the eyes, giving it a masked appearance. It also has a black nose and long whiskers. The tip of its tail is dark or black, and as you may have guessed, so are its feet. The dimensions and unique colorings of the BFF are not just for show. Their size makes them skillful at foraging and ferreting out prey, while their coloration helps them blend in with the color of the soil.

The black-footed ferret hunts primarily at night. when hunting, it watches and waits for the right moment to raid a prairie dog den. If a prairie dog senses the ferret, it usually will try to escape by disappearing into its burrow. But it's not safe there! The fierce BFF will slither along, low to the ground in true ferret form until it reaches the entrance. First, it will peer in. If it sees the unlucky prairie dog it will pounce. If it does not, the BFF will dive into the burrow for the kill. After eating, the BFF will sometimes scout around the burrow entrance. If it decides the burrow has a good vantage point, it may even move in!

Although the black-footed ferret has an advantage over prairie dogs, the relationship between these two species has become inextricable over time. BFFs keep prairie dog populations in check, since prairie dogs provide 95 percent of the BFFs diet. In fact, the BFF has become so dependent upon prairie dogs, the species may not thrive without them. The loss of prairie dog habitat has nearly caused their extinction.

Ferret Fact: If you see a domestic ferret, you can be sure it is not a BFF. Domesticated or pet ferrets are descendants of the European ferret.



Ferret Fact: Scientists say BFFs have not cooccured with the Threatened Utah prairie dog, which lives only in southwestern Utah.

Life On The Fringe: Before the early 1900s, prairie dog towns covered 20 percent of western rangeland - the short grass prairies and high desert grasslands. As the west become settled, things began to change. An extensive effort to eradicate prairie dogs and convert their habitat into land for grazing and farming was undertaken. Some prairie dog habitat gave way to development. Two diseases, sylvatic plague and canine distemper, also became more widespread, wiping out entire colonies of prairie dogs and ferrets. The fate of the black-footed ferret was sealed. Its demise was threefold: prairie dog eradication efforts, habitat loss and disease. Today, about one percent of original prairie habitat remains and ferret populations have followed suit.

By the early 1950s, BFFs were thought to remain only in small colonies throughout their original range. Declines continued though. In Utah, the last confirmed sighting of a BFF was in 1950 in San Juan County. By the 1960s, the only know wild colony nationwide was a small population in South Dakota. It was not thriving. In 1967, the federal government listed the BFF as an Endangered species. By the mid-1970s, the last known population from South Dakota died off. In 1978, the BFF was declared extinct by the US Fish and Wildlife Service.

Once Thought Lost, But Now Are Found: It's a true story made for Hollywood. The black-footed ferret is the comeback kid with Disney possibilities. Once upon a time, the BFF was thought to be extinct. Then one day near a small northwestern Wyoming town called Meeteetse, a ranch dog killed a critter and brought it home. The dog's owner could not identify the weasel-like mammal, so he called in a local biologist. The biologist identified the fallen critter as a BFF. The year was 1981. Within a couple of years, a small colony was found near Meeteetse, along with new hope for the species. Then a year later, the population of 129 suffered a rapid decline when both the prairie dog population and the BFFs were affected by plague and distemper. All were nearly destroyed. By the time biologists rescued the remaining wild BFFs, there were only 18 of them left. That year the BFF was the most endangered mammal on earth.

In 1987, the remaining 18 black-footed ferrets were taken to Sybille Canyon, Wyoming where the first captive breeding program began. Today, twelve facilities breed BFFs. Through this wide-scale recovery effort, over 2,200 BFFs have been raised. All of them are related to the 18 BFFs recovered from Meeteetse, Wyoming.

The Reintroduction Plan: So far, BFFs have been released in six sites across five states, including South Dakota, Wyoming, Montana, Arizona and Utah. Because reintroducing an endangered species can be very controversial, biologists, private interest groups, federal, local and state agencies and community members were brought together in each state to devise specific guidelines for each release site. Section 10(J) of the Endangered Species Act, developed for experimental, nonessential populations, was written into the plan for each state involved. This means the endangered BFF will be managed to allow for more flexibility to meet the needs of land users.

The Black-footed Ferret Recovery Team Plan for the black-footed ferret calls for 1,500 ferrets in 10 or more separate, self-sustaining, wild populations. Each population should have no fewer than 30 breeding adults. When these objectives are met, the species may be downlisted from Endangered to Threatened status. Biologists hope to have reached this goal by the year 2010.

The Ferret Forecast: The black-footed ferret has a long way to go before these goals can be met. The species still faces the same three problems which pushed it to the edge of extinction in the first place: prairie dog eradication efforts, habitat loss and disease. Saving an endangered species is up to all of us. Can we make room for the black-footed ferret? There are no easy answers, but we can put our best foot forward. What can you do? Continue to help others learn! Together we can all help forge a future for the black-footed ferret. For more on the Black-footed ferret, request the additional BFF resources on page 7 of this newsletter.

Check This Out!

Ferret Kit

Appropriate for all, PreK-12. Contains everything you need to help students learn about BFFs, including:

- BFF Poster
- Three BFF Videos
- Super Fun Activities
- Ferret Resource File
- BFF Track (rubber imprint)
- Two Story Books
- Two Stuffed Animals (a ferret and a prairie dog)

For Sale!

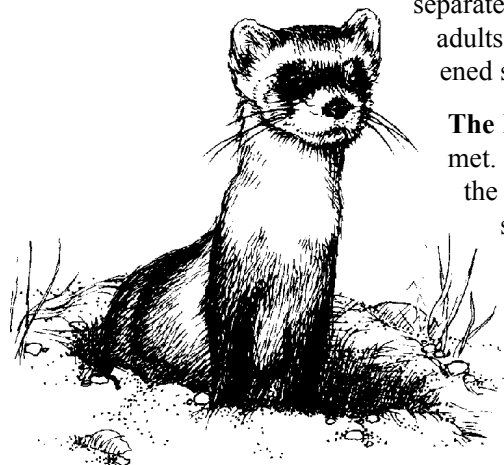
BFF Caps & T-Shirts!

Ball Caps (black): \$10
T-Shirts (gray, XL only): \$15

Magnets & Mugs!

BFF Magnets,
w/ black& white drawing:
Large \$5, Small \$4
Mugs, w/ photo of Amos
(a newly released ferret): \$15

To order, call
Project WILD: 801-538-4874



Watchable Wildlife Events - 2000

***Mark Your Calendar!!
(But Not With Musk!)****

March 3 & 4 - Snow Goose Festival. Delta area: Gunnison Bend Reservoir and Clear Lake Waterfowl Management Area. Contact: Lynn Chamberlain at (435) 865-6100.

April (Specific Dates: TBA) - Wildlife Photography Workshops. Southern Utah area. Contact Lynn Chamberlain at (435) 865-6100.

April (Specific Dates: TBA) - Wetland Birding. Ogden area. Contact Jerry Openshaw at (801) 476-2750.

May 5 & 6 - Desert Wildlife Festival. St George. Contact Lynn Chamberlain at (435) 865-6100.

May 13 - Migratory Bird Day/Wetlands Day. Numerous sites statewide. Contact Jaye Melcher at (801) 538-4864 or Frank Howe at (801) 538-4764.

May 9 Wildlife Photography Workshop. Vernal. Contact Ron Stewart at (435) 789-3103.

May 19 - Wildlife Photography Workshop. St. George. Contact Lynn Chamberlain at (435) 865-6100.

June 3 - "100 Species in a Day" Birding Classic. Utah County. Contact Scott Root at (801) 489-5678.

June 15 & 17 - Bald Eagle Viewing. Great Salt Lake area. Contact Bob Walters at (801) 538-4771.

June 24 - Bear Lake Cutthroat Trout Spawning. Strawberry Reservoir. Contact Scott Root at (801) 489-5678.

July 6 & 8- Burrowing Owl Viewing. West Jordan area. Contact Bob Walters at (801) 538-4771.

July 15 - Osprey Viewing. Flaming Gorge Reservoir. Contact Ron Stewart at (435) 789-3103.

July 29 - Osprey Viewing. Echo, Henefer, Wanship. Contact Bob Walters at (801) 538-4771.

August 5 - Rocky Mountain Goat Viewing. Tushar Mountains. Contact Lynn Chamberlain at (435) 865-6100.

August 12 (Tentative) - Wildflower and Bird Watching. Albion Basin. Contact Scott Root at (801) 489-5678.

September 16 - Kokanee Salmon Day. Three sites statewide. Contact Bob Walters at (801) 538-4771.

September 23 - Utah Raptor Watch Day. Three sites statewide. Contact Bob Walters at (801) 538-4771.

September 30 - Sandhill Crain Viewing. Jensen area. Contact Ron Stewart at (435) 789-3103.

October 14 - Hardware Ranch Elk Festival. Contact Lowell Marthe at (435) 753-6206.

October/November (Specific Dates: TBA) - Black-footed Ferret Releases. Vernal area: Coyote Basin. Contact Ron Stewart at (435) 789-3103.

November 16 - Bird Feeding Workshop. St. George. Contact Bob Walters at (801) 538-4771.

November 18 - Bighorn Sheep Festival. Moab area. Contact Brent Stettler at (435) 636-0266.

November 30 - Bird Feeding Workshop. Vernal. Contact Ron Stewart at (435) 789-3101.

***Note: Many of these viewing opportunities/
workshops require pre-registration.**

*Spotted
Skunk*



Contest

Student Artists Wanted!

for

The 2000 Federal Junior Duck Stamp Conservation and Design Program

Once again, students from Utah's schools will have the opportunity to compete with students from across the country in one of America's premier wildlife conservation competitions - The Federal Junior Duck Stamp Conservation and Design Program. This program, highlighted by a waterfowl art contest, features an integrated art and science curriculum developed to help students learn about environmental science and habitat conservation. Combining a scientific study of North America's waterfowl with the visual arts gives teachers a tremendous opportunity to apply principles of interdisciplinary education in their classrooms. The benefits of the Junior Duck Stamp program include:

Redheads



- Allowing students to experience creative learning activities centered around conservation;
- Support of conservation education through the arts;
- Scholarships and recognition for student achievers; and
- Encouragement for urban and minority students in outdoor education.

Conservation Through The Arts - Educator's Curriculum Guide

To assist educators in integrating the Junior Duck Stamp Contest into their current curriculum, the United States Department of the Interior, Fish and Wildlife Service has created an excellent new Educator's Curriculum Guide. Concentrating on waterfowl and wetlands, the curriculum gives students an opportunity to experience the beauty and diversity of wildlife at the same time they discover the interdependence found in nature. The new curriculum incorporates a strong base in science education with lessons that help students improve their science and art process skills. It also supports the current "multiple intelligence" theory of education through activities within the various art disciplines - visual, dance, dramatic, musical and language arts. For a **free** copy of the guide contact the Project WILD office at (801) 538-4719.

In Utah, the Junior Duck Stamp contest is sponsored jointly by the Ogden Nature Center and Project WILD, and is open to any student in grades K-12. Entries submitted to Project WILD by the **March 15, 2000** deadline will be judged against others in the artist's age group (K-3, 4-6, 7-9 and 10-12) with first, second, third place and honorable mention ribbons being awarded in each category. A Best of Show winner will also be selected to compete nationally against Best of Show winners from other states for scholarships and prizes.

Junior Duck Stamps are considered collectables, and are sold through post offices nationwide. Proceeds from the sales of Junior Duck Stamps are used to fund scholarships and prizes for the participants.

For additional information or for entry forms, contact Project WILD at (801) 538-4719 or the Ogden Nature Center at (801) 621-7595.

project WILD



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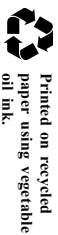
Growing WILD is written by Diana Vos and Audrey Walker. Edited by Vicki Umander. Illustrators: Clark Bronson, Cindie Brunner. Artwork may not be reprinted.



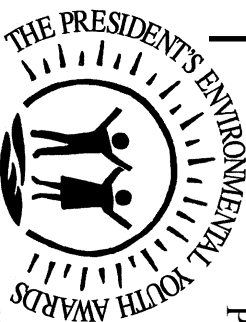
The Utah Department of Natural Resources receives federal aid and prohibits discrimination on the basis of race, color, sex, age, national origin, or disability. For information or complaints regarding discrimination, contact Executive Director, PO Box 145610, Salt Lake City, UT 84114-5610 or Office of Equal Opportunity, US Department of the Interior, Washington, DC 20240. The Division of Wildlife Resources is funded by the sale of hunting and fishing licenses and through federal aid made possible by an excise tax on the sale of firearms and other hunting and fishing-related equipment.



TAKE Pride IN
UTAH



President's Environmental Youth Awards



The President's Environmental Youth Awards program encourages individuals in grades K-12, summer camps and youth organizations to promote local environmental awareness and to

channel this awareness into positive community involvement. To apply, a young person, or a group of young persons, must have completed an environmental project while in grades K-12. The project must be sponsored by at least one adult representative of their school, camp, youth group or public interest group. Application forms can be obtained by writing: US Environmental Protection Agency, Region 8, Mail Code 80C, 999 18th St., Ste. 500, Denver, CO 80202-2466, Attention: Cece Forget, Environmental Education Program Manager (e-mail forget.cece@epa.gov). Applications must be postmarked by July 31, 2000. For more information about this awards program, visit <http://www.epa.gov/region08/edu/enved/enueduc.html#YOUTH>.